TECHNICAL REVIEW DOCUMENT
For
RENEWAL OF OPERATING PERMIT 95OPWE090

Colorado Interstate Gas Company – Cheyenne Compressor Station
Weld County
Source ID 1230051

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Revised February, March, August and November 2005

I. Purpose

This document will establish the basis for decisions made regarding the applicable requirements, emission factors, monitoring plan and compliance status of emission units covered by the renewed operating permit proposed for this site. The original Operating Permit was issued September 1, 1998. The expiration date for the permit was September 1, 2003. However, since a timely and complete renewal application was submitted, under Colorado Regulation No. 3, Part C, Section IV.C all of the terms and conditions of the existing permit shall not expire until the renewal operating permit is issued and any previously extended permit shield continues in full force and operation. This document is designed for reference during the review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the renewal application submitted August 28, 2002, additional technical information submitted January 9 and May 26, 2004 and February 18 and June 15, 2005, comments on the draft permit and technical review document received on April 20, 2005, comments received during the public comment period (September 8 thru October 13, 2005), previous inspection reports and various e-mail correspondence, as well as telephone conversations with the applicant. Please note that copies of the Technical Review Document for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at http://www.cdphe.state.co.us/ap/Titlev.html.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

II. Description of Source

The facility is a natural gas compression facility as defined under Standard Industrial Classification 4922. This facility is a mainline compressor station. Its main function is to compress and transmit natural gas from the Wyoming area to the Front Range area located in Colorado. This is achieved by using eight (8) internal combustion engine driven horizontal compressors.

In the summer of 2003 construction commenced on an additional internal combustion engine and turbine, both driving compressors as part of the Front Range Expansion Project (FREP). The FREP supplies gas to the Colorado Front Range and a power plant in Colorado Springs.

In the summer of 2004, construction commenced on the Cheyenne Plains Project (CPP), this additional expansion is to support a new pipeline transporting gas east into Kansas. As part of this project an additional internal combustion engine was installed and is addressed in this permit.

At this time the FREP equipment and the additional engine added as part of the CPP are being included in the renewal permit. The remainder of the CPP equipment will be addressed in a separate Title V operating permit (05OPWE281) to be issued in the future.

Based on the information available to the Division and provided by the applicant, it appears that no modifications have been made to the compressor engines identified in the current Title V permit.

The facility is located approximately 4 miles north of Rockport in Weld County on Highway 85. The area in which the plant operates is designated as attainment for all criteria pollutants.

There are two affected states within 50 miles of the plant: Wyoming and Nebraska. Rocky Mountain National Park, a Federal Class I designated area is within 100 kilometers of the plant.

Condensate Storage Tanks and Condensate Loading Equipment

Revisions were made to Colorado Regulation No. 3, regarding condensate storage tanks and condensate truck loading equipment and those revisions took effect on December 30, 2002. Previously, under Regulation No. 3, certain size condensate storage tanks and condensate truck loading equipment meeting a specified throughput limit were exempt from APEN reporting and permitting requirements and were considered insignificant activities for Title V operating permit purposes. With the revisions to Colorado Regulation No. 3, only condensate storage tanks and condensate truck loading equipment at exploration and production (E & P) sites, meeting specified throughput limits are APEN exempt and insignificant activities. No condensate storage

tanks are listed in Appendix A of the current permit. In their comments on the draft permit and technical review document received on April 20, 2005, the source confirmed that there are no condensate tanks or condensate loading equipment at this facility.

MACT Requirements

Natural Gas Transmission and Storage MACT (40 CFR Part 63 Subpart HHH)

There are no glycol dehydrators associated with the equipment addressed in the current Title V permit and none of the additional emission units (two engines and a turbine) addressed in this renewal are glycol dehydrators.

Case-by-Case MACT - 112(j) (40 CFR Part 63 Subpart B §§ 63.50 thru 63.56)

Under the federal Clean Air Act (the Act), EPA is charged with promulgating maximum achievable control technology (MACT) standards for major sources of hazardous air pollutants (HAPs) in various source categories by certain dates. Section 112(j) of the Act requires that permitting authorities develop a case-by-case MACT for any major sources of HAPs in source categories for which EPA failed to promulgate a MACT standard by May 15, 2002. These provisions are commonly referred to as the "MACT hammer".

Owner or operators that could reasonably determine that they are a major source of HAPs which includes one or more stationary sources included in the source category or subcategory for which the EPA failed to promulgate a MACT standard by the section 112(j) deadline were required to submit a Part 1 application to revise the operating permit by May 15, 2002. Based on the information provided by this source, the Cheyenne facility is a major source of HAPs (i.e. facility-wide potential to emit of greater than 10 tons per year of any single HAP or greater than 25 tons per year of all HAPs combined) for a covered source category (reciprocating internal combustion engines (RICE) and industrial, commercial and institutional boilers and process heaters) and did submit a Part 1 application to the Division prior to May 15, 2002. Since the EPA has signed off on final rules for all of the source categories, which were not promulgated by the deadline, the case-by-case MACT provisions in 112(j) no longer apply.

RICE MACT (40 CFR Part 63 Subpart ZZZZ)

The final rule for RICE was published in the Federal Register on June 15, 2004. The engines in the current Title V permit are 2-cycle clean burn engines. In accordance with the provisions in 40 CFR Part 63 Subpart ZZZZ § 63.6590(b)(2), existing (commenced construction or reconstruction prior to December 19, 2002) 2-stroke lean burn engines do not have to meet the requirements in 40 CFR Part 63 Subparts A and ZZZZ, including the initial notification requirements. The Division considers that the clean burn engines meet the definition of lean burn engines in 40 CFR Part 63 Subpart ZZZZ § 63.6675. In addition, emergency generators are included in the insignificant activity list in the current Title V permit. In accordance with the provisions in 40 CFR Part 63 Subpart ZZZZ § 63.6590(b)(2), existing emergency RICE do not have to meet the

requirements in 40 CFR Part 63 Subparts A and ZZZZ, including the initial notification requirements.

The FREP and CPP engines (both 4-stroke lean burn engines) were constructed after December 19, 2002 and therefore the RICE MACT requirements apply to these engines. The appropriate requirements from the RICE MACT will be included in the renewal permit. Those requirements are discussed in further detail under the discussion on the new engines later in this document.

Industrial, Commercial and Institutional Boilers and Process Heaters MACT (40 CFR Part 63 Subpart DDDDD)

The final rule for industrial, commercial and institutional boilers and process heaters was published in the Federal Register on September 13, 2004. The insignificant activity list in the current Title V permit identifies a couple of boilers that are potentially subject to the MACT requirements. The provisions in 40 CFR Part 63 Subpart DDDDD (§ 63.7506(c)(3)) exempt existing (constructed before January 13, 2003) small gaseous fired units ($\leq$ 10 mmBtu/hr) from the requirements in 40 CFR Part 63 Subparts A and DDDDD, including the initial notification requirements. Therefore, the industrial, commercial and institutional boilers and process heaters MACT requirements do not apply to the equipment in the current Title V permit.

None of the additional emission units addressed in the renewal permit (two engines and a turbine) are affected facilities under this subpart; therefore, the industrial, commercial and institutional boilers and process heaters MACT requirements do not apply to the equipment being added with this renewal permit.

Combustion Turbine MACT (40 CFR Part 63 Subpart YYYY)

There are no combustion turbines associated with the equipment identified in the existing Title V permit. However, with the FREP a combustion turbine was added to the facility. The final rule for combustion turbines was published in the Federal Register on March 5, 2004. During processing of the revised construction permit for the FREP turbine, the source submitted information indicating that the FREP turbine commenced construction prior to January 14, 2003 (a purchase order was issued on September 26, 2002). Therefore, in accordance with the provisions in 40 CFR Part 63 Subpart YYYY § 63.6090(b)(4), the FREP turbine does not have to meet the requirements in 40 CFR Part 63 Subparts A and YYYY, including the initial notification requirements.

Compliance Assurance Monitoring (CAM) Requirements

CAM applies to any emission unit that is subject to an emission limitation, uses a control device to achieve compliance with that emission limitation and has potential pre-control emissions greater than major source levels. None of the engines addressed in the current Title V permit are equipped with control devices; therefore, CAM does not apply to any of the equipment included in the current Title V permit.

The FREP turbine is equipped with a dry low NO_X (DLN) combustion system to reduce NO_X emissions. However, DLN is not considered a control device as defined in 40 CFR Part 64 § 64.1, as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV, since DLN is considered inherent process equipment. Therefore, CAM does not apply to the new turbine.

The FREP and CPP engines are equipped with oxidation catalysts to reduce CO and formaldehyde emissions. However, uncontrolled emissions of CO and formaldehyde are 59 and 9.44 tons/yr (CPP engine) and 42.8 and 6 tons/yr (FREP engine), which are below the major source levels of 100 and 10 tons/yr. Therefore, the CAM requirements do not apply to the new engines.

The summary of emissions that was presented in the Technical Review Document (TRD) for the original Title V permit issuance has been modified to more appropriately identify the potential to emit (PTE) to address the new FREP and CPP equipment. Emissions (in tons/yr) at the facility are as follows:

Facility Wide Emissions (95OPWE090 and 05OPWE281)

Pollutant	Potential to Emit (tons/yr)		
	95OPWE090	05OPWE281	Facility
NO_X	624.3	106.6	730.9
CO	262.8	172.1	434.9
VOC	291.3	58.9	350.2
HAPS	60.7	14.1	74.8

95OPWE090 Emissions

Emission Unit	Potential to Emit (tons/yr)			
	NO_X	CO	VOC	HAPS
Engine - E001 (CIG CG-1)	82.1	26.3	36.2	See Table on Page 26
Engine - E002 (CIG CG-2)	82.1	26.3	36.2	
Engine - E003 (CIG CG-3)	82.1	26.3	36.2	
Engine - E004 (CIG CG-4)	82.1	26.3	36.2	
Engine - E005 (WIC CG-1)	82.1	26.3	36.2	
Engine - E006 (WIC CG-2)	82.1	26.3	36.2	
Engine - E-7301 (WIC CG-7301)	39.5	39	30	
Engine - E-7401 (WIC CG-7401)	39.5	39	30	
Engine - E008 (FR CG-7501)	14.3	3.7	5.3	
Turbine - E009 (FR CG-7601)	17.2	18.1	1.4	
Engine – E010 (FR CG-7701)	21.2	5.2	7.4	
Total	624.3	262.8	291.3	60.8

The criteria pollutant PTE for the engines and turbine are based on permitted emissions. Even though actual emissions are typically much less than permitted emissions, the source usually reports permitted emissions as actual emissions, which is an acceptable practice; therefore actual emissions are not shown in the above table.

The breakdown of HAP emissions by emission unit and individual HAP is provided on page 26 of this document. As indicated in the footnotes for the table on page 26, the HAP PTE was determined as follows: for the engines in the current Title V permit it is based on design rate, permitted annual hours of operation (or 8760 hrs/yr) and the most conservative emission factor from AP-42 or HAPCalc 2.0, for the new engines it is based on the permitted emissions for formaldehyde and AP-42 emission factors for the other pollutants and for the FREP turbine, HAP emissions are based on AP-42 emission factors, design rate and 8760 hrs/yr of operation.

III. Discussion of Modifications Made

Source Requested Modifications

The source submitted their renewal application on August 28, 2002. In addition, the source submitted information on January 9 and May 26, 2004 to address the addition of the FREP emission units. In their comments on the draft permit submitted on April 20, 2005, the source requested that the engine permitted as part of the CPP also be added to the permit. Note that in these comments, the source indicated that the remaining CPP equipment would be addressed in a separate Title V operating permit application.

The above requests were addressed as follows:

Page following cover page

CIG requested in their August 28, 2002 renewal application submittal that a primary and secondary Responsible Official be identified in the permit for more flexibility in completing the required certifications. The Division will grant this request. However, CIG should be aware that whichever Responsible Official signs the documents, that person becomes the responsible party regarding any non-compliance situation related to the Operating Permit and is subject to both civil and criminal penalties that may be associated with non-compliance situations. In addition, the permit contact was changed.

Section II.5 – Fugitive VOC Emissions

In their January 9, 2004 submittal, the source indicated that they had done a physical hard-count of components added for the FREP and concluded that based on the additional components that the 5 ton/yr VOC limit was still appropriate for fugitive VOC emissions from equipment leaks. This evaluation was conducted using the fugitive VOC emission factors indicated in the current Title V operating permit (1993 emission factors).

In a February 18, 2005 letter to the Division and in their comments on the draft permit received on April 20, 2005, the source indicated that based on a component count, which includes all of the CPP equipment and the most recent emission factors (1995), fugitive VOC emissions from equipment leaks are less than the APEN de minimis levels and requested that fugitive VOCs be included in the insignificant activity list. The Division reviewed the information submitted and has included fugitive VOC emissions from equipment leaks in the insignificant activity list in Appendix A of the permit.

New Equipment

In their January 9, 2004 submittal, the source requested that provisions from the construction permits for the FREP equipment and the CPP engine be incorporated into the renewal permit. The addition of the FREP equipment and CPP engine was addressed as follows in the renewal permit:

Sections II.5 and 7 – New Engines

CG-7501/S008 - Caterpillar, Model No. 3606 TALE, Serial No. 4ZS00310, 4-Cycle Low NO_X, Natural Gas Fired Internal Combustion Engine. This engine is rated at 1775 hp and 13 mmBtu/hr and is equipped with an oxidation catalyst to reduce CO, VOC and formaldehyde emissions. This engine powers a natural gas compressor. CP # 03WE0184.

CG-7701/S010 - Caterpillar, Model No. 3608 TALE, Serial No. BEN00254, 4-Cycle Low NO_X, Natural Gas Fired Internal Combustion Engine. This engine is rated at 2443 hp and 16.47 mmBtu/hr and is equipped with an oxidation catalyst to reduce CO, VOC and formaldehyde emissions. This engine powers a natural gas compressor. CP # 03WE0910.

1. Applicable Requirements – An initial approval construction permit (03WE0184) was issued for the FREP engine (S009) on July 7, 2003. Following the issuance of the initial approval permit, the Division considered and the source agreed that the addition of this engine was considered part of the project for the CPP expansion and the construction permit was revised to include BACT limits on June 10, 2004. At that time, an initial approval construction permit (03WE0912) was issued for the CPP engine.

The source self-certified compliance with the July 7, 2003 construction permit (03WE0185) on May 26, 2004. The source self-certified the June 10, 2004 construction permits (03WE0185 and 03WE0912) on June 15, 2005, but has not received a final approval permit. Therefore, under the provisions of Colorado Regulation No. 3, Part C, Section V.A.3, the Division will not issue final approval construction permits and is allowing the initial approval construction permits to continue in full force and effect. The appropriate applicable requirements from the modified initial approval construction permits have been incorporated into the renewal permit as follows:

- Visible emissions shall not exceed twenty percent (20%) opacity during normal operation of the source. During periods of startup, process modification, or adjustment of control equipment visible emissions shall not exceed 30% opacity for more than six minutes in any sixty consecutive minutes (03WE0184, condition 2, 03WE0912, condition 1 and Regulation No. 1, Section II.A.1. & 4).

  Note that Colorado Regulation No. 1 does not identify the 20% opacity requirement as a condition that only applies during normal operation and EPA has objected, in comments on another operating permit, to the term "normal operations" applied to the 20% opacity standard. The specific operational activities subject to the 30% opacity requirement are also conditions that can be considered "normal operation". The 30% opacity requirement also applies during other specific activities that are not identified in the construction permit. The specific activities under which the 30% opacity standard applies are: building a new fire, cleaning of fire boxes, soot blowing, startup, any process modification, or adjustment or occasional cleaning of control equipment. Based on engineering judgment the Division considers that building a new fire, cleaning of fire boxes and soot-blowing does not apply to the operation of internal combustion engines. Although these engines have control devices, they do not control PM emissions and therefore would not affect opacity emissions. Process modifications and startup may apply to engines, however, based on engineering judgment, the Division believes that such activities would be unlikely to occur for longer than six minutes. Therefore, the 30% opacity requirement has not been included in the operating permit.

- Prior to commencing operation of the engine addressed by this permit and the emissions units addressed in permits 03WE0910, 03WE0913 and 03WE0916, stack heights will be raised to 65 feet for several existing engines (03WE0912, condition 2).

  According to the Division's February 7, 2005 inspection report, the stack heights for the existing engines have been increased to 65 feet. Therefore, this requirement will not be included in the renewal permit.

- Construction must commence within 18 months of initial approval issuance (03WE0912, condition 3).

  The engine has commenced operation; therefore, the requirement to commence construction will not be included in the permit.

- Manufacturer, model number and serial number shall be provided prior to final approval (03WE0912, condition 4).

  The source submitted the make, model and serial number for the engine in the self-certification on June 15, 2005; therefore, this requirement will not be included in the permit.

- The permittee shall notify the Division 30 days prior to startup (03WE0912, condition 6).

  The source submitted a startup notice for the engine on November 9, 2004, with an expected startup date of December 15, 2004; therefore, this requirement will not be included in the permit.

- This source is subject to the requirements of Prevention of Significant Deterioration (PSD). Best Available Control Technology (BACT) shall be applied for control of Oxides of Nitrogen (NO_X), Carbon Monoxide (CO) and Volatile Organic Compounds (VOC) (03WE0184, condition 4 and 03WE0912, condition 7), as follows:

  NO_X:
  - Lean burn combustion technology has been determined to be BACT for this engine.
  - NO_X emissions shall not exceed 0.27 lb/mmBtu on a 1-hr average

  CO:
  - An oxidation catalyst has been determined to be BACT for this engine.
  - CO emissions shall not exceed 0.07 lb/mmBtu, on a 1-hr average

  VOC:
  - An oxidation catalyst has been determined to be BACT for this engine.
  - VOC emissions shall not exceed 0.10 lb/mmBtu, on a 1-hr average
  - The oxidation catalyst shall be installed and operational within 90 days of commencement of construction of the CPP equipment (03WE0184 only).

    In their comments on the draft permit, the source indicated that the catalyst was installed on the engine upon startup, which was November 15, 2003.
  - Compliance with the BACT limits shall be demonstrated by conducting the performance tests required by Condition 5. Thereafter compliance with the NO_X and CO BACT limits will be monitored by conducting quarterly portable monitoring tests.

- A performance test shall be conducted within 180 days of installation of the catalyst (03WE0184) or startup (03WE0912) to monitor compliance with the NO_X, CO, VOC and formaldehyde emission limits (03WE0184, condition 5 and 03WE0910, condition 8).

  Performance tests were conducted on May 24 and 25, 2005 for the 03WE0184 engine and on May 26 and June 1, 2005 for the 03WE0912 engine and the reports have been submitted to the Division. Therefore, the performance test requirements will not be included in the permit.

- This source shall be subject to the following fuel use limits (03WE0184, condition 6 and 03WE0912, condition 9):

  Consumption of natural gas shall not exceed the following limits:

  03WE0184 engine: 9.5 mmSCF/mo and 112 mmSCF/yr

  03WE0910 engine 13.3 mmSCF/mo and 157 mmSCF/yr

  Note that the monthly emission limits for the engines apply during the first year of operation following: installation of the catalyst [November 15, 2003], for engine 03WE0184 and startup [December 15, 2004] for the 03WE0912 engine.

  Since the 03WE0184 engine has been in operation for more than one year, the monthly fuel consumption limits will not be included for that engine.

- This source shall be subject to the following emission limits (03WE0184, condition 7 and 03WE0912, condition 10):

  <u>03WE0184 engine</u>

  Prior to addition of the oxidation catalyst

NO_X	1.5 tons/mo	and	17.1 tons/yr
CO	4.4 tons/mo	and	51.4 tons/yr
VOC	1.5 tons/mo	and	17.1 tons/yr

  Upon the addition of the oxidation catalyst

NO_X	1.2 tons/mo	and	14.3 tons/yr
CO	0.31 tons/mo	and	3.7 tons/yr
VOC	0.45 tons/mo	and	5.3 tons/yr
Formaldehyde	0.22 tons/mo	and	2.72 tons/yr

  The monthly limits apply for the first twelve months of operation beginning with the installation of the catalyst [November 15, 2003]. Since twelve months have passed since installation of the catalyst, the monthly limits will not be included in the permit for this engine.

  Since, as discussed above, the catalyst has been installed, only the emission limits that apply upon the addition of the catalyst will be included in the renewal permit.

  <u>03WE0912 engine</u>

NO_X	1.8 tons/mo	and	21.2 tons/yr

CO	0.44 tons/mo	and	5.2 tons/yr
VOC	0.63 tons/mo	and	7.4 tons/yr
Formaldehyde	0.32 tons/mo	and	3.8 tons/yr

The monthly limits apply for the first twelve months of operation following startup [December 15, 2004].

- The source is subject to the odor requirements in Regulation No. 2 (03WE0184, condition 8 and 03WE0912, condition 11)).

  Engines are not generally a source of odor therefore this condition will not be specifically included in the permit but is included in the General Conditions (Section IV) of the permit.

- Within 180 days after commencement of operation, compliance with the conditions contained on this permit shall be demonstrated to the Division (03WE0184, condition 9 and 03WE0912, condition 12).

  The source submitted a self-certification for the June 10, 2004 permits on June 15, 2005; therefore, this requirement will not be included in the permit.

- Prior to issuance of final approval, the applicant shall submit to the Division for approval an operating and maintenance plan for all control equipment and control practices and a proposed recordkeeping format for demonstrating compliance on an ongoing basis (03WE0184, condition 10 and 03WE0912, condition 13).

  The operating and maintenance plan was submitted by the source on June 9, 2005. The operating permit will include the appropriate requirements to monitor compliance with the permit terms. The operating and maintenance requirements proposed by the source in their operating and maintenance plan have been considered for inclusion in the renewal permit.

- Upon promulgation the source will be subject to 40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (03WE0184, condition 11 and 03WE0912, condition 14). These requirements were published in the Federal Register on June 15, 2004. The compliance date for the 03WE0184 engine was August 14, 2004 and for the 03WE0912 engine the compliance date was upon startup (December 15, 2004).

  For lean burn engines, the source can comply with either a CO reduction requirement or an outlet formaldehyde emission limit. The Division has assumed that the source will comply with the CO reduction requirements and has included those provisions in the permit. The source confirmed in their April 20, 2005 comments on the draft permit that they were following the CO reduction requirements in the MACT.

In addition, for lean burn engines, the source has the option to install a continuous emission monitoring system (CEMS) or use a continuous parametric monitoring system (CPMS). The source confirmed in their April 20, 2005 comments on the draft permit that they were using a CPMS.

- APEN reporting requirements (03WE0184, condition 12 and 03WE0912, condition 15).

  The APEN reporting requirements will not be identified in the permit as a specific condition but are included in Section IV (General Conditions) of the permit, condition 22.e.

- An application for the modification of the Operating Permit is due within one year of commencing operation (03WE0912, condition 16).

  In their comments on the draft permit submitted on April 20, 2005, the source indicated that they wished to have the conditions for this engine rolled into their renewal permit. The Division considers that this satisfies the requirement to submit the Title V modification application; therefore, this requirement will not be included in the permit.

2. Emission Factors – The emission factors identified in the renewal permit are the BACT limits. In processing the construction permits, the source proposed BACT limits in g/hp-hr, which are also the basis for the annual emission limits. However, for determining annual emissions the Division converts g/hp-hr emission factors to fuel based emission factors, due to the uncertainties in measuring the horsepower. Therefore, the Division set the BACT limits in the same units as the emission factors. The g/hp-hr values were converted to lb/mmBtu, based on the following equation and the values in the table below:

$$\text{Lb/mmBtu} = \frac{\text{g/hp-hr} \times 10^6 \text{ Btu/mmBtu}}{\text{Heat rate (Btu/hp-hr)} \times 453.6 \text{ g/lb}}$$

Pollutant	Emission Factor (g/hp-hr)	Engine Heat Rate (Btu/hp-hr)	Converted Emission Factor (lb/mmBtu)
NO_X	0.8	6,620 – 03WE0184 6,581 – 03WE0912	0.27
CO	0.21		0.07
VOC	0.3		0.10
Formaldehyde[1]	0.4		0.13

[1]This emission factor is based on uncontrolled emissions, a control efficiency of 60% can be presumed for calculating annual emissions.

3. Monitoring Requirements – The source will be required to monitor fuel consumption and calculate monthly emissions to monitor compliance with the fuel consumption and emission limitations. Quarterly portable monitoring shall be required to monitor compliance with the NO_X and CO BACT emission limitations, emission factors and annual emission limitations. Compliance with the VOC BACT limit is

presumed provided the engine and control device are operated and maintained in accordance with the operation and maintenance and startup, shutdown and malfunction requirements specified by the RICE MACT. Compliance with the percent CO reduction requirements (RICE MACT) will be monitored by continuously recording the catalyst inlet temperature and keeping it greater than or equal 450 º F and less than or equal to 1350 º F, monitoring the pressure drop monthly and semi-annual tests to verify the CO percent reduction.

Section II.6 – New Turbine

CG-7601/S009 - Solar Taurus, Model No. 60-7800S, Serial No. 1255T, Natural Gas Fired Combustion Turbine. The turbine is rated at 6,536 hp and 58 mmBtu/hr. This turbine is equipped with a dry low NO_X combustion system to reduce NO_X emissions. This turbine powers a natural gas compressor.

1. Applicable Requirements – An initial approval construction permit (03WE0185) was issued for this turbine on July 7, 2003. Following the issuance of the initial approval permit, the Division considered and the source agreed that the addition of this turbine was considered part of the project for the CPP expansion and the construction permit was revised to include BACT limits on June 10, 2004. In November 2004, the source applied for a modification to the permit in order to include alternative BACT limits for periods when the temperature is below 0 ° F. A revised construction permit was issued on March 29, 2005.

The source self-certified compliance with the July 7, 2003 construction permits on May 26, 2004. A self-certification was submitted on June 15, 2005, presumably with regards to the March 29, 2005 revised construction permit, but has not received a final approval permit. Therefore, under the provisions of Colorado Regulation No. 3, Part C, Section V.A.3, the Division will not issue a final approval construction permit and is allowing the initial approval construction permit to continue in full force and effect.

The appropriate applicable requirements from the modified initial approval construction permit have been incorporated into the renewal permit as follows:

- Visible emissions shall not exceed twenty percent (20%) opacity during normal operation of the source. During periods of startup, process modification, or adjustment of control equipment visible emissions shall not exceed 30% opacity for more than six minutes in any sixty consecutive minutes (condition 2, Regulation No. 1, Section II.A.1. & 4).

  As discussed above under the new engine, Reg 1 does not identify the 20% opacity requirement as a condition that only applies during normal operation. In addition, there are more specific activities under which the 30% opacity requirement applies than identified in the construction permit. The specific activities under which the 30% opacity standard applies are: building a new fire, cleaning of fire boxes, soot blowing, startup, any process modification, or adjustment or occasional cleaning of control equipment. Based on engineering

judgment the Division considers that building a new fire, cleaning of fire boxes and soot-blowing does not apply to the operation of combustion turbines. In addition, this turbine does not have a control device, so adjustment or occasional cleaning of control devices do not apply to this turbine. Process modifications may apply to the turbine, however, based on engineering judgment, the Division believes that such activities would be unlikely to occur for longer than six minutes. Therefore, the 30% opacity requirement has been included in the operating permit for startup of the unit.

- This source is subject to the requirements of Prevention of Significant Deterioration (PSD). Best Available Control Technology (BACT) shall be applied for control of Oxides of Nitrogen (NO_X), Carbon Monoxide (CO) and Volatile Organic Compounds (VOC) (condition 4), as follows:

  NO_X:
  - o SoLoNO_X II (dry low NO_X (DLN)) combustion systems has been determined to be BACT for this turbine.
  - o Except as provided for below, NO_X emissions shall not exceed 15 ppmvd at 15% O_2 on a 1-hr average
  - o When the ambient temperature is less than 0 º F but greater than or equal to –20 º F, NO_X emissions shall not exceed 42 ppmvd.
  - o When the ambient temperature is less than –20 º F, NO_X emissions shall not exceed 120 ppmvd.

  CO:
  - o Good combustion practices has been determined to be BACT for this turbine.
  - o Except as provided for below, CO emissions shall not exceed 25 ppmvd at 15% O_2 on a 1-hr average
  - o When the ambient temperature is less than 0 º F but greater than or equal to –20 º F, CO emissions shall not exceed 100 ppmvd.
  - o When the ambient temperature is less than –20 º F, CO emissions shall not exceed 150 ppmvd.

  VOC:
  - o Good combustion practices and use of pipeline quality natural gas as fuel have been determined to be BACT for this turbine.
  - o Except as provided for below, VOC emissions shall not exceed 3 ppmvd at 15% O_2 on a 1-hr average
  - o When the ambient temperature is less than 0 º F but greater than or equal to –20 º F, VOC emissions shall not exceed 5 ppmvd.
  - o When the ambient temperature is less than –20 º F, VOC emissions shall not exceed 8 ppmvd.

  - o For the alternative BACT limits during colder temperatures the source is required to keep records of the number of hours the temperature meets the specified criteria.

- Compliance with the BACT limits shall be demonstrated by conducting the performance tests required by Condition 12. Thereafter compliance with the NO_X and CO BACT limits will be monitored by conducting quarterly portable monitoring tests. At least annually, such portable monitoring shall be conducted at the low temperatures for which alternative BACT limits have been required, unless ambient conditions or extended periods at those temperatures are not sufficient to conduct monitoring.

- The turbine is subject to the requirements in 40 CFR Part 60 Subpart GG Standards of performance for Stationary Gas Turbines, including, but not limited to the following (condition 5):

  - NO_X limits shall not exceed 172.8 ppmvd at 15% O_2 and ISO conditions (§ 60.332(a)(2))
  - SO_2 emissions not to exceed 150 ppmvd at 15% O_2 or sulfur content of fuel not to exceed 0.8 % by weight (§ 60.333(a) and (b))

  The construction permit did not address any of the monitoring requirements associated with the NSPS GG limits, but did specify that compliance with the SO_2 limit would be presumed when natural gas was used as fuel. Revisions to NSPS Subpart GG were published in the Federal Register (Volume 69, No. 13) on July 8, 2004. These revisions include alternative monitoring methods that EPA has approved on a case-by-case basis for other turbines over the years. If a source is using gas that meets the definition of natural gas in 40 CFR Part 60 Subpart GG § 60.331(u), then no fuel sampling for sulfur content is required. The source may demonstrate that they are using natural gas based on either fuel sampling or the gas quality characteristics in a valid contract or tariff sheet from the gas supplier. BACT for VOC was determined to be use of pipeline quality natural gas and good combustion practices. 40 CFR Part 72 includes a definition of pipeline quality natural gas, which contains much less sulfur than natural gas as defined in § 60.331(u). Since pipeline natural gas has less sulfur than natural gas, the Division considers that no sulfur sampling is required to demonstrate that the gas used as fuel is natural gas. As with the requirements in NSPS GG for demonstrating natural gas is used as fuel, the source can make the pipeline quality natural gas demonstration using the gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel.

  The NSPS GG revisions also indicate that sources that do not claim the fuel-bound nitrogen allowance are not required to monitor the nitrogen content of the gas. The fuel bound nitrogen allowance was not used to set the NSPS GG NO_X emission limits; therefore, no sampling is required for NSPS GG.

  The NSPS GG revisions also included alternative methods for continuously monitoring compliance with the NO_X limits. For existing turbines (construction commenced prior to July 8, 2004), any previously approved monitoring for NO_X can be used instead of the alternatives identified in the revised NSPS GG

provisions. The NSPS GG requirements in effect when this turbine was permitted did not require any continuous monitoring for turbines without water or steam injection. The only requirements for turbines without water and steam injection were to monitor the nitrogen and sulfur content of the fuel and a one-time stack test. Since this is an existing turbine and continuous monitoring of NO_X was not required for this unit under the NSPS GG requirements in effect when the unit was constructed and permitted, the Division considers that no additional monitoring is required for NO_X. Note that as discussed under "Streamlining of Applicable Requirements", the NSPS NO_X limit will be streamlined out of the permit in favor of the more restrictive NO_X BACT limit.

- In addition, the turbine is also subject to the NSPS General Provisions in 40 CFR Part 60 Subpart A, including, but not limited to the following (condition 6):

    - Good practices (§ 60.11(d))
    - Circumvention (§ 60.12)
    - Record startup, shutdowns and malfunctions (§ 60.7(b))

  Note that other requirements were noted in the construction permit but some of these requirements no longer apply (i.e. startup notification, performance test).

- The source is subject to Regulation No. 6 – Standards of Performance for New Stationary Sources, Part B – Specific Facilities and Sources, Non-Federal NSPS, II – Standards of Performance for New Fuel-Burning Equipment, D – Standard for Sulfur Dioxide, 3 – Combustion Turbines (condition 7). These are **state-only requirements**.

    - SO_2 emissions shall not exceed 0.8 lbs/mmBtu.
    - Opacity of emissions shall not exceed 20%

  Although not specifically identified in the construction permit, the turbine is also subject to the particulate matter requirements in Reg 6, Part B, as follows:

    - Particulate matter emissions shall not exceed $0.5(FI)^{-0.26}$ lbs/mmBtu, where FI = fuel input in mmBtu/hr

- Sulfur dioxide emissions shall not exceed 0.8 lb/mmBtu (condition 8, Reg 1, Section VI.B.4.c.(i))

- Particulate matter emissions shall not exceed $0.5(FI)^{-0.26}$ lbs/mmBtu, where FI = fuel input in mmBtu/hr (condition 9 and Reg 1, Section III.A.1.b).

- This source shall be subject to the following fuel use limits (condition 10):

Consumption of natural gas shall not exceed 43.6 mmSCF/mo and 513.7 mmSCF/yr

Note that the monthly emissions apply during the first year of operation following issuance of the modified initial approval construction permit (March 29, 2005).

- This source shall be subject to the following emission limits (condition 11):

NO_X	1.46 tons/mo	and	17.2 tons/yr
CO	1.54 tons/mo	and	18.1 tons/yr

Note that the monthly emission limits apply during the first year of operation following issuance of the modified initial approval construction permit (March 29, 2005).

- The source is subject to the odor requirements in Regulation No. 2 (condition 12).

  Turbines are not generally a source of odor therefore this condition will not be specifically included in the permit but is included in the General Conditions (Section IV) of the permit.

- Within 180 days after commencement of operation, compliance with the conditions contained on this permit shall be demonstrated to the Division (condition 13).

  The source submitted a self-certification on June 15, 2005; therefore, this requirement will not be included in the permit.

- APEN reporting requirements (condition 14)

  The APEN reporting requirements will not be identified in the permit as a specific condition but are included in Section IV (General Conditions) of the permit, condition 22.e.

Streamlining of Applicable Requirements

Opacity

The Reg 1 20% opacity requirement applies at all times, except for certain specific operating conditions under which the Reg 1 30% opacity requirement applies. Reg 6, Part B, Section I.A, adopts, by reference, the 40 CFR Part 60 Subpart A general provisions. 40 CFR Part 60 Subpart A § 60.11(c) specifies that the opacity requirement are not applicable during periods of startup, shutdown and malfunction. The Reg 1 20%/30% opacity requirements are more stringent than the Reg 6 Part B opacity requirements during periods of startup, shutdown and malfunction (see attached opacity grid). While the Reg 6, Part B 20% opacity requirement is more stringent during fire building, cleaning of fire boxes, soot blowing, process modifications and adjustment or

occasional cleaning of control equipment. However, as discussed previously, the Division considers that for the turbine the only specific activity under which the 30% opacity standard would apply is startup. Therefore, since the Reg 1 20%/30% opacity requirements are more stringent than the Reg 6, Part B requirements the Reg 6 Part B opacity requirement has been streamlined out of the permit.

PM and SO_2

The turbine is subject to the Regulation No. 1 and No. 6, Part B PM and SO_2 standards. The PM and SO_2 requirements in both Reg 1 and Reg 6, Part B are the same standard. The Regulation No. 6, Part B requirement is a state-only requirement. Reg 6, Part B, Section I.A, adopts, by reference, the 40 CFR Part 60 Subpart A general provisions. Although not specifically stated in the general provisions, the Division has concluded after reviewing EPA determinations that the NSPS standards are not applicable during startup, shutdown and malfunction, unless indicated otherwise in the specific subpart, although any excess emissions during these periods must be reported in the excess emission reports. Specifically, EPA has indicated (4/18/75, determination control no. A007) that when 40 CFR Part 60 Subpart A § 60.11(d) was developed "…it was recognized that sources which ordinarily comply with the standards may during periods of startup, shutdown and malfunction unavoidably release pollutants in excess of the standards." In addition, EPA has also indicated (5/15/74, determination control number D034) that "[s]ection 60.11(a) makes it clear that the data obtained from these reports are not used in determining violations of the emission standards. Our purpose in requiring the submittal of excess emissions is to determine whether affected facilities are being operated and maintained 'in a manner consistent with good air pollution control practices for minimizing emissions' as required by 60.11(d)." Therefore, the Division considers that the Reg 6, Part B PM and SO_2 requirements do not apply during periods of startup, shutdown and malfunction. Therefore, the Regulation No. 1 PM and SO_2 requirements are more stringent than the Regulation No. 6, Part B requirements and the Regulation No. 6, Part B requirements will be streamlined out of the permit.

NO_X

The NSPS Subpart GG and BACT concentration limits are in the same units and therefore they can be compared for purposes of streamlining. The BACT averaging time is hourly. For purposes of reporting excess emissions under NSPS GG, turbines equipped with water and steam injection and continuous monitoring systems to record the fuel consumption and the ratio of water/steam to fuel need to report every hour that the steam/water to fuel ratio falls below the acceptable level as determined by the performance test. This implies that the standard is on a 1-hour average. However, under the NSPS GG revisions, for units equipped with a continuous emission monitoring device or continuous parametric monitoring device, excess emissions are reported on a 4-hour rolling average. Therefore, the NSPS GG limit may be on either a 1-hour or a 4-hour rolling average, which is either an equal or less stringent averaging time that the BACT limit. The BACT concentration limits are applicable at all times. The Division considers that the NSPS Subpart GG requirements are not applicable during periods of startup, shutdown and malfunction (as discussed in the PM and SO_2 streamlining

section above). Therefore, since the NSPS Subpart GG limits are less stringent than the BACT concentration limits, the NSPS Subpart GG limits will be streamlined out of the operating permit.

Miscellaneous

The turbine is subject to the NSPS general provisions (40 CFR Part 60) on a federal and state basis (the units are subject to 40 CFR Part 60 Subpart GG) and on a state-only basis (the units are subject to Reg 6, Part B, Section II and the NSPS general provisions are adopted by reference in Reg 6, Part B, Section I.A). Therefore, the Division will streamline the state-only NSPS general provisions out of the permit in favor of the state and federal NSPS general provisions.

In addition, since BACT for VOC is use of pipeline quality natural gas as fuel limits the sulfur content below the level of natural gas as defined in § 60.331(u), the Division will streamline out the sulfur monitoring requirements in NSPS GG (§ 60.334(h)(3)).

2. Emission Factors – The following emission factors shall be used to monitor compliance with the annual limitations:

Unit	Emission Factors			Emission Factor Source
	NO_X	CO	VOC	
Taurus 60 Turbine (03WE0185)	T≥ 0 º F: 0.063 lb/mmBtu -20 º F ≤ T < 0 º F: 0.177 lb/mmBtu T < -20 º F: 0.504 lb/mmBtu	T≥ 0 º F: 0.064 lb/mmBtu -20 º F ≤ T < 0 º F: 0.257 lb/mmBtu T < -20 º F: 0.384 lb/mmBtu	T≥ 0 º F: 0.004 lb/mmBtu -20 º F ≤ T < 0 º F: 0.007 lb/mmBtu T < -20 º F: 0.105 lb/mmBtu	Manufacturer's Info: **T ≥ 0º F:** based on NO_X at 3.67 lbs/hr (manufacturer plus 15%) and CO at 3.73 lbs/hr (manufacturer's plus 15%) divided by max heat rate (58 mmBtu/hr). VOC is based on 10% of UHC (per manufacturer UHC = 0.035 lb/mmBtu). **For the lower temperatures** the emission factors are based on the above emission factors adjusted to the higher ppm limit.

3. Monitoring Requirements - The source will be required to monitor fuel consumption and calculate monthly emissions to monitor compliance with the fuel consumption and emission limitations. Quarterly portable monitoring shall be required to monitor compliance with the NO_X and CO BACT emission limitations, emission factors and annual emission limitations. Compliance with the VOC BACT emission limits is

presumed provided pipeline quality natural gas is used as fuel and good combustion practices are applied.

Other Modifications

In addition to the modifications requested by the source, the Division has included changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal.

The Division has made the following revisions, based on recent internal permit processing decisions and EPA comments, to the Cheyenne Renewal Operating Permit with the source's requested modifications. These changes are as follows:

Page following Cover Page

- The citation (above "issued to" and "plant site location") on the page following the cover page provides the incorrect title for the state act. The title will be changed from "Colorado Air Quality Control Act" to "Colorado Air Pollution Prevention and Control Act". In addition, the dates were removed from the citation.

- Clarified dates for monitoring and compliance periods, i.e. changed "September - February" to "September 1 – February 28(29)".

  It should be noted that the monitoring and compliance periods and report and certification due dates are shown as examples. The appropriate monitoring and compliance periods and report and certification due dates will be filled in after permit issuance and will be based on permit issuance date. Note that the source may request to keep the same monitoring and compliance periods and report and certification due dates as were provided in the original permit. However, it should be noted that with this option, depending on the permit issuance date, the first monitoring period and compliance period may be short (i.e. less than 6 months and less than 1 year).

- Added language specifying that the semi-annual reports and compliance certifications are due in the Division's office and that postmarks cannot be used for purposes of determining the timely receipt of such reports/certifications.

General

- The Reg 3 citations were revised throughout the permit, as necessary, based on the recent revisions made to Reg 3.

Section I – General Activities and Summary

- The language in Condition 1.3 was changed based on comments made by EPA on other Operating Permits. In addition the permit numbers for the additional equipment were added to the list.

- Conditions 13 and 17 in Condition 1.4 were renumbered to 14 and 18 and Condition 21 in Condition 1.5 was renumbered to 22. The renumbering changes were necessary due to the addition of the Common Provisions requirements in the General Conditions of the permit.

- In Condition 1.4 General Condition 3.g (Common Provisions, Affirmative Defense) was added as a State-only requirement.

- Minor language changes were made to Condition 3.1 to more appropriately reflect the status of the source with respect to PSD.

- Based on comments made by EPA on another operating permit, the phrase "Based on the information provided by the applicant" was added to the beginning of Condition 4.1 (112(r)).

- In the summary table in Condition 5.1, the identifying numbers for equipment were revised to reflect the numbering system in the CPP PSD permit application. According to the Division's 2/8/01 inspection report, the serial number for engine CG-7401 is 48468. This was included in the table in Condition 5.1.

- Added a "new" Section 5 for compliance assurance monitoring (CAM), note that no emission units are subject to CAM.

<u>PSD Issues related to Engines E001 – E006 (CIG CG-1 through CG-4 and WIC CG-1 and CG-2)</u>

Initial approval construction permits (C-11,631-1 thru –4) for engines E001 thru E004 were issued on February 21, 1978, with final approval permits issued on April 9, 1979. The permits indicated that these engines were each rated at 2400 hp and included the 20 % opacity requirement and a NO_X limit of 300 lbs/hr. At 300 lbs/hr for each engine the Cheyenne facility was a major stationary source when these engines were installed. Since these engines had obtained their construction permits prior to March 1, 1978 and construction commenced before March 19, 1979, these engines were exempt from the 1977 prevention of significant deterioration (PSD) review requirements (final rule published June 19, 1978).

Engines E001 – E004 were converted to clean burn in 1982. Initial approval construction permits were issued for the modification to these engines on March 1, 1982 with permitted emissions at 78 tons/yr NO_X, 25 tons/yr CO and 34.4 tons/yr VOC, for each. The permits also indicated that the engines were each rated at 2,565 hp. At the same time, permits were issued to two new engines (E005 and E006). The permits indicated that the new engines were each rated at 2,565 hp with permitted emissions of

78 tons/yr NO_X, 25 tons/yr CO and 34.4 tons/yr VOC. Permitted emissions for the new engines exceeded the significance levels for NO_X and VOC.

EPA issued a PSD permit for the addition of two (2) 2,565 hp engines and two (2) 6,000 hp engines on September 12, 1980. The permit included NO_X limits of 34 lbs/hr (2,565 hp engines) and 79.3 lbs/hr (6,000 hp engines). On March 17, 1982 based on a request from CIG, EPA granted an 18-month extension to the September 12, 1980 PSD permit. With the extension of the EPA PSD permit, certain modifications were made to the permit (as mentioned in the letter, the modifications were discussed with CIG in a meeting on March 2, 1982). The modifications included emissions limits for CO and VOC and notification and recordkeeping requirements (startup notice and record malfunctions and upsets).

During processing of the original Title V permit, the Division asked the source if any of the engines addressed in the EPA PSD permit were ever installed. The source's response (letter received on January 20, 1998) indicated that none of the engines addressed in the EPA PSD permit were installed.

There was no information in the preliminary analysis for the 1982 construction permits for the conversion of E001 – E004 to clean burn and the initial permitting of E005 and E006, that indicates that the source intended to use emission reductions from E001 – E004 to get out of PSD review for E005 and E006. In fact, with the extension of the EPA PSD permit for the 4 engine (2 at 2,565 hp and 2 at 6,000 hp), it seems that maybe E005 and E006 may have been addressed in the EPA PSD permit. However, the Division was able to locate in the files, a letter from the Division to CIG, dated July 14, 1981, that states "[a]lthough emissions reduction credits are usually requested only for non-attainment areas where such "banked" credits can be kept, sold or traded for offsets….The enforceable reduced emissions would be used by EPA to cancel increases under PSD (within time constraints of the PSD regulations) and I assume this is the reduction credit CIG seeks", which implies that CIG intended to use emission reductions from engines E001 – E004 to net out of PSD review, presumably for engines E005 and E006. Based on the information in that letter, in conjunction with the fact that current permitted emissions for engines E005 and E006, are for the most part lower than the limits provided in the EPA PSD permit (see table below), the Division considers that engines E005 and E006 were not subject to PSD review because there was no significant net emission increase.

Pollutant	Emission Limits (lbs/hr)	
	EPA PSD Permit Limit	Current Permitted Emissions[1]
NO_X	34	18.7
CO	9.6	6.06
VOC	4.18	8.3

[1]The lbs/hr emission rate for current permitted emissions was calculated based on the emission factor and the design heat input rate (mmBtu/hr) of the engine. Note that the NO_X and CO emission factors are verified during portable monitoring.

It is not clear why the EPA PSD permit for the 4 engines was extended after issuance of the construction permits for engines E005 and E006. Presumably, CIG still had intentions of expanding the facility, but ultimately never did so.

Sections II.1, 2 3 and 4 – Internal Combustion Engines

- The portable monitoring language was moved to "new" condition 8, so that the language does not have to be repeated numerous times. The portable monitoring language was updated to the current language, which requires that the portable monitoring conducted verify the emission factors in the permit.

- Removed Condition 4.1 since this engine has commenced operation.

- Removed the monthly emission and fuel use limits in Conditions 4.2 and 4.3, the monthly limits only apply for the first year of operation.

- Removed the performance test from Condition 4.2 since the test has already been conducted.

- Revised the language in Conditions 1.1, 2.1, 3.1 and 4.2 (for calculating emissions) based on changes to the portable monitoring language. In addition, revised the equations to calculate emissions in "tons/mo" rather than "lbs/mo".

- Added language to Conditions 1.2, 2.2, 3,2 and 4.3 to indicate that fuel use is determined with a facility fuel meter and fuel is allocated based on engine size and hours of operation.

- Under "monitoring method" in the Table for Conditions 1.3, 2.3, 3.3 and 4.4, added the following phrase "or In-Line Gas Chromatograph".

- The language specifying the 20% opacity requirement (Conditions 1.4, 2.4, 3.4 and 4.5) was rewritten to more closely resemble the language in Regulation No. 1.

- In the Table for Conditions 1.4, 2.4, 3.4 and 4.5, placed "Fuel Restriction" under "Monitoring Method" and under "Monitoring Interval" added "whenever natural gas is used as fuel".

- Revised the monitoring method in Conditions 1.4, 2.4, 3.4 and 4.5 to reflect EPA approved language.

Note that no condition is included for the 30% opacity standard, which is applicable during certain operating activities. The specific activities under which the 30% opacity standard applies are: building a new fire, cleaning of fire boxes, soot blowing, startup, any process modification, or adjustment or occasional cleaning of control equipment. Based on engineering judgment the Division considers that building a new fire, cleaning of fire boxes and soot-blowing does not apply to the

operation of internal combustion engines. In addition, these engines do not have control devices, so adjustment or occasional cleaning of control devices do not apply to these engines. Process modifications and startup may apply to engines, however, based on engineering judgment, the Division believes that such activities would be unlikely to occur for longer than six minutes. Therefore, the 30% opacity requirement has not been included in the operating permit.

Section III – Permit Shield

- The citation in the permit shield was corrected. The reference to Part C, Section XIII was changed to Part C, Section XIII.B and references to Part C, Section VI.C.1.b and C.R.S. § 25-7-111(2)(i) were removed.

- The title for Section 1 was changed from "Specific Conditions" to "Specific Non-Applicable Requirements" and a new section 3 was added for subsumed (streamlined) conditions. Note that streamlined conditions as discussed under the FREP turbine have been included here.

- Based on comments made by EPA on another permit, the following phrase was added to the beginning of the introductory sentence in Section 1 "Based upon the information available to the Division and supplied by the applicant".

- Based on comments made by EPA on another permit, the following statements were added after the introductory sentence in Section 1 "This shield does not protect the source from any violations that occurred prior to or at the time of permit issuance. In addition, this shield does not protect the source from any violations that occur as a result of any modification or reconstruction on which construction commenced prior to permit issuance".

- Based on comments made by EPA on another permit, the phrases regarding reconstruction or modification under the shield for NSPS K, Ka, Kb and KKK were removed. It is EPA's opinion that the Division may not have all of the information available to determine whether a reconstruction or modification has occurred and as a result the justification should not address modifications or reconstructions.

Section IV - General Conditions

- Added an "and" between the Reg 3 and C.R.S. citations in General Condition 3 (compliance requirements).

- Added language from the Common Provisions (new condition 3). With this change the reference to "21.d" in Condition 20 (prompt deviation reporting) will be changed to "22.d", since the general conditions are renumbered with the addition of the Common Provisions.

- The citation in General Condition 7 (fees) was changed to cite the Colorado Revised Statue. In addition, any specific identification of a fee (i.e. $100 APEN fee) or citation of Reg 3 was removed and replaced with the language "…in accordance with the provisions of C.R.S. [appropriate citation]."

- The citation in General Condition 13 (odor) was corrected. In addition, the phrase "Part A" was added to the citation for Condition 13 (odor). Colorado Regulation No. 2 was revised and a Part B was added to address swine operations. Colorado Regulation No. 2, Part B should not be included as a general condition in the operating permit.

- The citation in General Condition 16 (open burning) was revised. The open burning requirements are no longer in Reg 1 but are in new Reg 9. In addition, changed the reference in the text from "Reg 1" to "Reg 9".

- Added the requirements in Colorado Regulation No. 7, Section V.B (disposal of volatile organic compounds) to General Condition 28.

Appendices

- First Page of Appendices – The phrase "except as otherwise provided in the permit" was added after the word "enforceable" in the disclaimer at the request of EPA.

- Appendix B and C were replaced with revised Appendices.

- Included alternate engine identifiers (from CPP PSD permit application) to the equipment in the tables and included the serial number for engine CG-7401.

- The EPA addresses in Appendix D were corrected.

- Added ppm, ppmv and pppmvd to the list in Appendix E

HAPs Per Division Analysis (95OPWE090)

Unit	HAP Emissions (tons/yr)									
	acetaldehyde	acrolein	benzene	toluene	2,2,4-trimethylpentane	xylene	formaldehyde	n-hexane	methanol	**total**
E001 - E004	2.66	2.67	0.69	0.33	0.29		18.93	0.33	0.85	26.75
E005 & E006	1.25	1.25	0.34	0.15	0.14		8.88	0.15	0.40	12.56
E-7301	0.64	0.64	0.17	0.08	0.07		4.54	0.08	0.20	6.42
E-7401	0.64	0.64	0.17	0.08	0.07		4.55	0.08	0.20	6.43
E008 (engine)	0.43	0.26	0.02	0.02		0.01	2.72			3.46
E009 (turbine)	0.01			0.03		0.02	0.18			0.24
E010 (engine)	0.60	0.37	0.03	0.03		0.01	3.81			4.85
Total	6.23	5.83	1.42	0.72	0.57	0.04	43.61	0.64	1.65	60.71

Engine emissions are based on most conservative emission factor (from AP-42 and HAPCalc 2.0, for 2-cycle lean burn engines and/or 2-cycle lean/clean burn) for each pollutant.

Emisssion from E008, E009 and E010 are from the preliminary analysis for the CPP and FREP PSD permit.

Fugitive VOC emissions are below APEN de minimis and since facility is major for HAPS without them, they are not included in the table.